

NE-70

Interpretation of DOE 5480.21, "Unreviewed Safety Questions"

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A number of concerns regarding implementation of Department of Energy (DOE) Order 5480.21, Unreviewed Safety Questions (USQs), have been raised since the Order was issued in December 1991. In particular, concerns have been expressed about the implementation of Paragraph 10d of DOE 5480.21 which requires that:

When a contractor identifies information that indicates a potential inadequacy of previous safety analyses or a possible reduction in the margin of safety as defined in the Technical Safety Requirements (TSRs), the contractor shall:

- (1) Notify the Program Secretarial Officer (PSO) of the situation upon discovery of the information;
- (2) Make an evaluation in accordance with Paragraphs 10a and 10c;
- (3) Take action to place the facility in a safe condition until the safety evaluation is completed; and
- (4) Submit the completed safety evaluation prior to removing any operational restrictions initiated pursuant to Paragraph 10d(2).

The purpose of this memorandum-of-interpretation is to provide clarification and additional guidance relative to the concerns raised to promote implementation of DOE Order 5480.21 in a manner consistent with its intent.

1. **POTENTIAL INADEQUACY**

Issue: Concern has been expressed that the identification of a "potential inadequacy" requires immediate notification and action to put the facility/operation in a safe condition prior to confirming that a problem really exists. Further, the concern has also been expressed that premature action taken prior to completion of an analysis might place the facility/operation into an unsafe condition.

Interpretation: The language of the Order shall be interpreted to mean that a reasonable time period is permitted to confirm the existence of a potential inadequacy of a previous safety analysis. Upon discovery of this potential inadequacy, it is incumbent on the contractor to communicate its concerns, formally or informally, to the appropriate DOE line management; and with DOE line management, determine if interim actions are necessary. Formal reporting, i.e.,

under DOE Order 5000.3A, to the Department is not required until the existence of the inadequacy of the safety analysis is confirmed.

2. **INADEQUATE SAFETY ANALYSIS**

Issue: Concern has been expressed that the term "inadequacy of previous safety analyses" is too broad and requires further definition. In addition, the concern has been expressed that all TSR and SAR changes could be interpreted to require being treated as USQs.

Interpretation: The term "safety analysis" used in DOE 5480.21 means the safety analysis that supports the current/interim authorization basis upon which the Department relies to limit the risks associated with operation of the facility to an acceptable level. The term inadequate safety analysis as used throughout DOE 5480.21 should be interpreted to refer only to those situations in which the safety analysis supporting the current/interim authorization basis is found not to be bounding. Since Paragraph 10d applies only to those cases wherein the situation exceeds the bounds of the safety analysis, most SAR and TSR change requests can be processed routinely in accordance with DOE 5480.22 and 5480.23, respectively.

Many of the USQs being declared today are mistakenly being based on comparisons of new or upgraded requirements to the authorization basis approved by the Department many years ago. Actions taken in response to upgrade requirements, such as DOE 5480.22 and 5480.23, should be treated as separate upgrade activities that do not impact the current/interim authorization basis and, therefore, new information developed or discovered as a result of such upgrades is excluded from the requirements of section 10d of DOE 5480.21.

DOE 5480.23 calls for PSO approval of a basis for interim operation or restrictions on interim operations during the upgrade process. This approval effectively establishes an interim authorization basis. This interim authorization basis may be as simple or complex as the PSO deems appropriate for accepting the risks associated with operating during the upgrade period. For any facility/operation in an upgrade status, any case of potentially inadequate analysis should be compared to the current or interim authorization basis. If, however, while reviewing the SAR, a condition is found which questions the basis for interim operation, that situation would need to be evaluated per DOE 5480.21.

3. **DUPLICATIVE REPORTING**

Issue: Concern has been expressed that the requirement to notify the PSO of the situation upon discovery of the information is duplicative of reporting requirements in DOE Order 5000.3A.

Interpretation: Reporting under DOE Order 5000.3A fulfills the requirement of Paragraph 10d of 5480.21 to notify the PSO, as long as the occurrence report identifies the situation as involving a USQ.

4. **USQ IMPLICATIONS TO FACILITY SAFETY**

Issue: Concern has been expressed that the declaration of a USQ carries with it the stigma that a facility/operation is unsafe.

Interpretation: The existence of a USQ does not mean that the

facility/operation is unsafe. The purpose of the USQ process is to alert DOE of events, conditions, or actions which affect the DOE approved authorization basis of the facility/operation and assure appropriate DOE line management action. The purpose of the USQ process is not to determine the safety of the situation. If, however, a condition is discovered that involves an increase in the risk of operating a facility beyond that in the current/interim authorization basis, DOE line management must review and determine the acceptability of that risk through the process of approving a revised authorization basis.

5. **USQ AND OPERATING EVENTS**

Issue: Concern has been expressed that DOE 5480.21 requires that every event that exceeds the bounds of the safety analysis represents an unreviewed safety question.

Interpretation: Not every event that results in exceeding the boundaries of a safety analysis is a USQ. For example, the occurrence of an operational event that results in increasing the consequences beyond those established in the safety analysis would not be a USQ if, upon review, it was determined that the increased consequences of the event was caused by failure to follow procedures rather than analytical inadequacies. Therefore, each operational event must be reviewed individually to determine if a USQ exists.

6. **PSO INVOLVEMENT IN THE USQ PROCESS**

Issue: Concern has been expressed that excessive time and effort are involved in obtaining direct PSO approval.

Interpretation: PSOs have the latitude to delegate authority for USQ actions as indicated in Section 9a(8) of DOE 5480.21.

7. **REDUNDANT REQUIREMENTS: DOE 5480.21, 5480.22, 5480.23, 5000.3A**

Issue: Concern has been expressed that it is unnecessary to apply DOE 5480.21 if actions have been taken under other Orders such as the SAR Order (DOE 5480.23), the TSR Order (DOE 5480.22), or the Reporting Order (DOE 5000.3A).

Interpretation: DOE 5480.22, 5480.23, and 5000.3A do not require a comparison of new information or operational events to the authorization basis, the identification of increases in the risks, or the review and acceptance of any additional risk by the Department. These important functions are required by DOE 5480.21.

As in the past, any change to the authorization basis for a facility/operation, whether resulting from the declaration of a USQ or not, requires DOE approval.

Background information related to the pertinent Orders is provided in Attachment 1. Specific guidance is provided in Attachment 2. Questions in regard to the interpretations should be directed to Neal Goldenberg, Director, Office of Nuclear Safety Policy and Standards.

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Subject - Interpretation of 5480.21

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NE-72 - rdr

NE-72 - hold

NE-70 - rdr

NE-70 - hold

NE-13 (4)

NE-1 (3)

NE-72:MCampagnone:daj:7053:10/13/92:usqrev4.13

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Revised:NGoldenberg:daj:3465:12/24/92:usqrev4.13

NE-73

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/ /92

NE-73

Volpe

/ /92

NE-70

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/ /92

NE-2

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/ /92

NE-1

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/ /92